THE UNIVERSITY OF WASHINGTON

Arboretum bulletin

SPRING 1967

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A MESSAGE FROM THE PRESIDENT

OF THE

UNIVERSITY OF WASHINGTON ARBORETUM FOUNDATION

That the members of the Arboretum Foundation may know what amounts have been paid to the University of Washington Department of Forestry, and for what Arboretum purposes during the past six months, the following statement is submitted for your information:

Sept. 1966 - March 1967

Sept. 15, 1966	B.O. Mulligan travel allowance (paid direct to Mulligan)		300.00
Dec. 9, 1966	Catalog-Arboretum Plants	1,500.00	
	Arbor-Japanese Garden	2,750.00	
	Training Program for Japanese Gardeners	4,000.00	
	Education Program	1,500.00	
	Arboretum Library Projects	1,000.00	
			10,750.00
	Slope Improvement by Lookout		1,800.00
Jan. 12, 1967	Rental Chipper Machine	180.00	
	Summer Maintenance	1,500.00	
	Travel for Greenhouse Propagator	500.00	
	Apply on Purchase of Mist Sprayer	746.02	2,926.02
March 9, 1967	Balance on Mist Sprayer	953.98	
	Summer Maintenance	800.00	
	To Establish an Arboretum Foundation Library Fund for Purchase of Books for the University of Washington Arboretum Library	826.93	
			2,580.91
March 14, 1967	Arbor-Japanese Garden (Ikibana Chapter)		500.00
March 16, 1967	Arbor-Japanese Garden (from Memorial Fund)		2,000.00
	TOTAL		$ 20,856.93

The above monies have come from membership dues, 1966 Plant Sale and from special contributions for specific purposes.

I have received letters of thanks and appreciation from the Director of the Arboretum and the Dean of Forestry for these donations to the University. The results of the use of this money will soon be visible.

Yours sincerely,

Ford Q. Elvidge

Ford Q. Elvidge

THE UNIVERSITY OF WASHINGTON

Arboretum bulletin

A JOURNAL OF GENERAL HORTICULTURAL INFORMATION
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COVER PHOTO:

Alnus spaethii—Staminate Catkins

PHOTO BY: WILLIAM ENG

A Guide to Early Flowering Rhododendron Species In The University of Washington Arboretum

Marjorie Baird*

In the average year "early spring rhododendrons" are those which are in full bloom by mid-April. If the weather is unusually warm, many will have "gone over" by then; if unusually cool, they will be delayed. Our usual temperatures, however, are conducive to a flowering period per plant of up to six weeks—*unless* we have hard or late frosts.

Since this article is supposed to help the rhododendron addict find the early species in bloom and to introduce the interested gardener to a larger number of the Genus, I must warn that the lath house plants mentioned are constantly being moved out to the permanent plantings. The species that did not bloom last year will, for the most part, not be mentioned, as I used the 1966 blooming calendar as reference. Notwithstanding, take your Species book and look them up as you find them!

You will note that many labels read "near" or "aff." with the specific name. These plants have been compared with the botanical description and do not fit it identically, but come very close. This is true of many of the species here at the Arboretum, but time does not permit the keying of every single seedling from seed sources all over the world.

If you have questions concerning a plant, jot down its number or location and one of the extremely accomodating staff, Mr. Mulligan, Mr. Witt, or Mr. Vandenburgh, will do his best to answer them. Without these gentlemen, this article could not have been written and they have by deepest gratitude.

Rhododendron Glen

Let us start down the Glen. Wear your rubber gardening boots as the paths are often wet and slippery. It would be well to put a hand lens in your pocket.

On your left, shaded by a named form of *Magnolia salicifolia*, 'Wada's Memory', is a bed labelled Ponticum Series. Of the four early species represented here, only *R. degronianum* has flower buds this year. Its leaves are narrow and slightly recurved, with a fawn-colored indumentum below. This is a low shrub, averaging five feet at its maximum, with a greater spread, and is very closely allied with others of its series from Japan. We will have to wait till another year to see the flowers of *R. makinoi*, also from Japan, *R. hyperythrum*, from Formosa, and *R. adenopodum*, a white indumented species from China.

The large white-flowered plant in the background, farther along, is *R. arboreum album*, with a group of red and pink arboreum hybrids.

Just beyond the stone bench and large native Big Leaf Maple (*Acer macrophyllum*), is a planting of *R. spiciferum*, with sprightly pink and white flowers and small hairy leaves. Also here are some rosy-purple members of the Lapponicum Series, labelled "aff. *R. ravum*."

We now come to a mass of pink *R. racemosum*, with more mauve-blue Lapponicums and their hybrids. Just past the native red huckleberry (*Vaccinium parvifolium*) on the right, stands *R. charianthum*, now known as a good pink form of *R. davidsonianum*. On the bank below are several *R. desquamatum* with their interesting metallic leaves and bright mauve-pink blooms. Around the rotting stump is planted a group of *R. davidsonianum*. Sometimes this member of the large Triflorum Series flowers too late to be included in this list, but often it is in full bloom by mid-April.

Dominating the area is a "grove" of large

We are grateful to Mrs. (Hugh) Baird for this excellent compilation. She spent hours in the Arboretum personally visiting each of her "subjects" checking on authenticity of name and location.

stately *R. sutchuenense var. Giraldii,* whose lovely purple-blotched pink trusses brave the inclement weather of February. Farther on, a group of *R. sutchuenense*, itself, is just as magnificent but lacks the blotch. This species may grow to more than twenty feet and its leaves may attain twelve inches in length. They are rather good thermometers—the colder it gets, the lower they droop!

If you glance down the grass path to your right, you will see more examples of *R. desquamatum,* one of which was beginning to open its buds the last of January. Quite a sight on a dull day!

R. orthocladum will be found beyond the big Western Red Cedar (*Thuja plicata*) with a background of *R. desquamatum* for its blue flowers. The small *R. rupicola* has purplish-crimson blooms. Its name means "dweller in stony places", which seems appropriate, as it is indigenous to Yunnan and Szechwan at ten to fourteen-thousand foot altitudes.

More Triflorums are just beyond: *R. yunnanense,* white; *R. charianthum,* pink; *R. augustinii,* shades of blue, and *R. oreotrephes,* pinkish-mauve.

On your right, beside a low rock, is a fascinating little plant, *R. williamsianum.* It is the only real dwarf in the Thomsonii Series. Its large shell-pink pendant flowers, neat rounded foliage, and red-bronze new growth make it a most desirable addition to any garden. It is used a great deal in hybridizing where it seems to be the domi nant parent.

At time of this writing, a plant of *R. hanceanum 'Nanum'* near the top of the wooden steps had a fat bud showing its yellow color. Most of this species I have seen flower in May! It is a low, compact, slow-growing plant, its dark green leaves a nice foil for its yellow flowers.

Three handsome scarlet-flowered *R. fulgens* (aff.) stand on the bank at your left, the undersides of their leaves clothed with a thin tawny indumentum. A few steps farther and you will find a plant with the large name of *R. chamae-thomsonii var. chamaethauma,* "chamae" meaning "ground" or "ground-hugging". This bright red-flowered species is in the Neriiflorum Series, not the Thomsonii, as the name implies. It is very closely related to *R. forrestii var. repens.*

Now you will pass more members of the Triflorum Series and their hybrids and continue on to the stone look-out. Keep it on your left and watch your step as you go down the steep, and often slippery, slope.

Across the path from the large maple is another early flowering member of the Fortunei Series, *R. praevernum,* meaning "before spring".

Soon the path widens and on the right are two large plants of *R. wallichii,* the smaller of which should have many trusses of lilac-colored flowers, spotted with rose. This is a close kin of *R. campanulatum* and can only be separated from it by the type and amount of hairs which make up the indumentum.

Next, let us examine an interesting member of the Barbatum Series. (Your hand lens will be useful here.) *R. crinigerum* has pinkish-white flowers based with a glandular calyx half an inch long. The young shoots are very viscid, with long-stalked glands. Veins on the upper leaf surfaces are impressed, while the lower surfaces are covered with dense white to tan indumentum.

And now we will see more *Lapponicums* —the blue *R. fastigiatum,* F.C.C. form, *R. scintillans,* and a group of the dwarf *R. impeditum* surrounding the hybrid R. "Impeanum". At the point of the bed on the left, a young *R. augustainii var. chasmanthum* stands next to *R. bodinieri,* a mauve-rose relative of *R. yunnanense.* Just below is *R. glomerulatum* and down the slope beyond the beautiful Mountain Hemlock (Tsuga mertensiana) you will see a planting of *R. intricatum* and *R. hippophaeoides* with a background of *R. oreotrephes* and *R. desquamatum.*

Don't miss seeing two plants of *R. roxieanum,* about half-way up the wood steps on the east side. One plant has many buds, the other none, but the branches are woolly,

the indumentum on the undersides of the leaves a rusty-fawn color. This is quite a variable species in the Taliense Series, but whether its compact truss opens to creamy-white or white with a flush of rose at the base, it will surely intrigue you.

Across from the splendid Yulan Magnolia (*Magnolia denudata*) are more *R. impeditum and R. yunnanense,* and just beyond it is a group of yellow-flowered *R. lutescens* (F.C.C. form). This is my favorite of the Triflorums, with its wide-open florets, long-exserted stamen, and decorative bronze new shoots. Beyond is a mass of floriferous Triflorums, shading from white to mauve to blue. At the foot of the hill another group of *R. ravum* is planted across the way from a mass of pink *R. racemosum,* blue *R. russatum,* and mauve-blue *R. hippophaeoides.*

Continue up the hill beside the little stream and if you are there in late January or early February, a group of *R. mucronulatum,* perched among the rocks on the left bank, will delight you with bright mauve-pink flowers, "like butterflies on the bare branches". There is a flight of wooden steps just beyond, and although I found no flower buds this year, I must for future visits, point out *R. strigillosum,* about half-way up, on either side. This is another striking member of the Barbatum Series, boasting large brilliant scarlet trusses. I think you can get near enough to look down upon the topmost whorl of bright green leaves and see their petioles beset with stiff tawny bristles—the strigose hairs from whence its name—reminding one of the magnified geometric forms of snow-flakes. Note the recurved margin and down-curving of the leaf. It is sometimes referred to as the "Chinese *R. barbatum*" because of its habitat—Szechwan, at seven to ten thousand foot altitudes.

The area on your right, which includes the stream, is the Clarence Prentice Memorial. Beside the path, near its junction with a north-bound lateral, is the low mound of mauve-pink *R. pemakoense* whose buds and flowers are often frost-nipped, so early does it dare to open. It enjoys a little protection from the north and east.

If you continue straight ahead, you will find yourself at your original starting point at the head of the Glen, but it would be worth your while to make a small detour. Turn hard left along the path parallelling Arboretum Drive.

Near the junction of the path which goes down the steps where I pointed out *R. strigillosum,* there is a lovely *R. vernicosum,* its pink-white trusses and large waxy leaves hinting of the Fortunei Series. This may become a tree up to twenty feet and is closely related to *R. decorum.* Beyond, and somewhat behind the thicket of shrubs and trees, you will find *R. moupinense.* It began flowering the first part of February. This small neat-leaved shrub is a joy to behold with its white, wide-open bloom complemented by dark-reddish anthers. There is only one plant of it here, surrounded by its lovely hybrid, R. "Cilpinense". In this same bed is *R. neriiflorum,* two to three feet high with dull green leaves and bright red trusses; also a group of *R. calostrotum* seedlings which put forth their bright rose-magenta flowers earlier than the type or its relatives in the Saluenense Series. Its leaves are only about an inch long and your hand lens will enable you to see how scaly both surfaces are.

If you head back toward the parking area, past the Maude Sawyer Memorial Fountain, you will see more *R. hippophaeoides* and *R. racemosum* on the east bank, in the Williams Memorial. If, however, you do not have to hurry away, keep heading north along the path parallelling the Drive. Pass the wide grassy area and a large bed of hybrid rhododendrons. Just beyond the next path down-hill you will see another nice *R. vernicosum* and the bright red *R. thomsonii* with its blue-green ovate leaves. This is the upper corner of the Thomsonii Series bed. Walk down the small path and as it meets the larger walk, turn left and you will pass between two large *R. erubescens,* the "blushing rhododendron", closely akin to *R. fargesii* which is

just beyond. It is worth walking around the Fortunei bed to see, on the other side, the lovely *R. oreodoxa,* whose name means "glory of the mountains", it covers itself, when mature, with rosy bells, set off by the elliptic leaves with glaucous undersurfaces.

Elsewhere in the Arboretum

If you continue on around to the main path and turn left, or north, you will come to the Endre Ostbo Memorial planting, where there is another plant of *R. hyperythrum* and several *R. williamsianum.*

West of the Magnolia section and above this lower trail is a service road along which may be found the pink-flowered *R. metternichii,* closely related to *R. degronianum,* and *R. polylepis,* a lavender-to-purple Triflorum, planted with more *R. desquamatum.* Farther north is a bed of *R. albrechtii,* a charming deciduous azalea from Japan, with rose-pink flowers. Look also for the pink-flowered *R. pachytrichum,* its new shoots shaggy with brown hairs; and *R. dryophyllum,* with a pink-to-white truss, whose medium sized leaves are glossy above and have a suede-like tan indumentum below. Along the upper side of these beds, or closer to the Drive, may be found an early-blooming form of the pink *R. callimorphum,* a group of *R. augustinii* seedlings, which includes a good blue, and some plants of *R. floccigerum,* a crimson-to-rose-flowered member of the Neriiflorum Series.

As you head north on Arboretum Drive,

Below—
Rhododendron pemakoense on rock wall behind West Greenhouse.
Photo by: E. F. Marten
Fig. 1

beyond the Glen parking area, there is a new planting of azaleas. Among other rhododendrons planted here is *R. araiophyllum*, a rather obscure member of the Irroratum Series. Although it has no buds this year, its new shoots are said to be red and woolly and we can look forward to its flowering another year.

Down the Loderi Valley road, you will find another member of the Lacteum Series. In the center of the second large bed on your right behind towering R. "Loderi Venus", is a small plant of *R. beesianum*. It has only one bud this year, but should be worth seeing.

The dainty blossoms of *R.mucronulatum* brighten several spots in the Arboretum, but a really breath-taking sight is the group, which includes one *R. dauricum*, just down the left side of Azalea Way at the north entrance. More can be seen near the picnic tables. In April a mass of blue *R. Augustinii* makes a beautiful display on the right of this end of Azalea Way. A few yards south of the picnic area you will see, on your right, a bed of *R. reticulatum*, another deciduous Japanese azalea, whose rose-purple flowers open before its leaves are fully mature. In the fall, the leaves turn a blackish-purple. Not much farther on, nestled beside the "Winter Garden" sign, is a lovely specimen of *R. moupinense*. Beyond and on your right, is a group of good color form of *R. mucronulatum*, which has been given the name "Cornell Pink". Where the trail forks turn west, down the hill, and planted around the Cornelian Cherries (the yellow-flowering Dogwood, *Cornus mas*), are some *R. kaempferi* with coral blossoms, and the beautiful *R. schlippenbachii* with large pink flowers. These are found in several other places, including the south entrance of Azalea Way and the Japanese Garden.

The Japanese Garden

Speaking of the Japanese Garden, you will find nice plants of *R. keiskei*, a small yellow Triflorum, at the base of the rocks under a large pine just inside the South gate. And on the bank, at the west end of the stone bridge, are two plants of *R. irroratum* which will bloom this year.

At the Arboretum's north entrance, just below the clubhouse, is a planting which includes several seedlings of *R. adenogynum*, which are quite possibly hybrids. If not frosted they should be very beautiful, however, with pink-shaded trusses opening in April and fascinating indumented foliage.

The Lath House

The large lath house, just south of the greenhouse, is closed on week-ends, but on other days you may prowl. On your way around the west end of the greenhouse, there is a good compact plant of the floriferous *R. pemakoense* at the end of the rock wall. In the lath house look for plants of *R.'s moupinense, leucaspis, chryseum, ciliatum, aureum** (a pale yellow truss was about to open in early February!), *mucronulatum* 'Cornell Pink', *imperator, fastigiatum, russatum, tephropeplum, neriiflorum, floccigerum, williamsianum* and other interesting species.

I hope your walk has not exhausted you, but I expect that if you have been bitten by the Rhododendron Bug you will not notice it, so thrilled will you be at seeing the reigning royalty of the plant world!

A list of the species mentioned in this article, in their Series.

Azalea Series:
albrechtii
kaempferi
reticulatum
schlippenbachii

Arboreum Series:
arboreum album

Barbatum Series:
crinigerum
pachytrichum
strillosum

Boothii Series:
leucaspis
tephropeplum

Campanulatum Series:
fulgens
wallichii

Dauricum Series:
dauricum

(*Continued on Page 19*)

*This is referred to by British authorities as *R. chrysanthum*. However, Tor K. Nitzelius, noted Swedish botanist, and Mr. Ohwi, in his "Flora of Japan", (1965 English language edition, published by the Smithsonian Institution) use "aureum" as the specific name.

A Professional Horticultural Exploration of England and Scotland

Part II

J. A. Witt

June 11

Today was Wisley day! We boarded our coach about 8:00 a.m. and drove southwest through London, out into the green areas surrounding this huge city where we saw our first cricket matches in progress; through several small towns and, after about an hour's ride, into the Royal Horticultural Society's gardens at Wisley. We were met by Mr. Frank Knight, the Director who was kind enough to devote the rest of the day to escorting us through the plantings and trial areas. Again time was pressing and if it were not for Mr. Knight's extensive knowledge of the grounds and the plants growing in them we would have been lost.

My first impression was one of spaciousness and of the excellent use of vistas and open spaces in displaying good plant material. Everything was very clean, well tended, and the beds nearly weed-free, an indication of the high degree of maintenance and good cultural practices carried on by the staff and students. Although we were much too late for the rhododendrons and azaleas, we did see the delphinium trials at their peak of flowering. These were planted in a huge block with tall spikes in many shades of blue, some good white and some fair pinks. Perhaps I should be more ecstatic over them but frankly the flowers have become so large and so doubled as to seem blowzy.

Mr. Knight led us through the main rhododendron collection on Battleston Hill where a few late flowering hybrids were still in flower. I was impressed with the large leaved species, *R. rex, R. sinogrande,* and others were much larger than any we have in the Arboretum.

One very interesting feature here was the peat wall, a low wall built of blocks of peat and planted with a wide variety of acid loving plants. *Phyllodoce,* dwarf rhododendrons, *Cassiope, Shortia,* etc. They seem to thrive mightly in this high-organic material which would also give them a cool and moist root-run. I wonder if we can get peat blocks like these at home?

Our next stop was the Alpine houses, full of alpine treasures many of which were flowering. The yard, protected by a tall hedge, had a delightful collection of alpine pans—carved stone troughs not more than three feet square and about a foot deep each planted with a miniature garden of choice rock and/or scree plants.

Below the Alpine houses was their rock garden, built on a steep north facing slope and very gay with *Campanula* species, various dwarf brooms, *Incarvillia, Geranium* species, *Iris laevigata* in the pond and stream area and much, much more. The rockwork was done very well in naturalistic outcroppings of stone that had been softened by the use of dwarf conifers. We met Mr. C. D. Brickell, Botanist and senior scientific officer here. He took part of our party through the greenhouses while the rest went for a quick trip past the herbaceous borders and various floral trials. Lunch at the Restaurant on the grounds and then a brisk trot through the pinetum with Mr. Knight in the lead. Since Wisley's pinetum isn't threatened by an expressway and is some years older than ours, it is in much better condition. There are some very fine specimens there including the first large tree of Frets' Douglas fir, *Pseudotsuga Menzieii* 'Fretsii' I'd ever seen. It is a densly compact tree with very thick foliage.

Time was pressing and we nearly sprinted past the shrub collection, but I paused long enough to get a quick look at the dwarf conifers—planted on a low rise and veary beautifully kept and neatly labeled.

Most of the group returned to the Rock Garden for a last look then into the coach and a short drive to the home and garden of Mr. Roy Hay, a well known writer on gardening. His home was a wonderful brick house built in the early 17th century. Mr. Hay's garden, on the other hand, was very modern since he tries the latest gardening equipment before recommending it to his readers. Returned to London past the same cricket players still at it in the early evening, and many, many families enjoying the fine evening—the official birthday of the Queen. There appears to be a series of greenbelts, parked, semi-wild, and under cultivation around London that must make life much more pleasant for those in the city. After dinner we walked in the parks around the Houses of Parliament until closing time—10:30 p.m. about, listened to the booming of Big Ben's chimes, and then to bed—dead tired.

June 12

Sunday. A fine day for a drive west from London to the Savill Gardens, part of the crown estate of Windsor Great Park. We saw more cricket (the same matches as yesterday?) then past a net of canals with their barges, past the meadows of Runnymede and into the Savill Gardens under a darkening sky which bode ill for photography. Mr. T. H. Findley, Keeper of the Gardens, took us—at a pace somewhat between a trot and a gallop—through the rhododendron collection now both wet and out of flower but fine nevertheless, to a small temperate house and the large weeping willow which was the first tree planted in the gardens in 1932. On past a pleasant herbaceous border, we hurried, to their famous wall, one of the finest bits of gardening I've ever seen. It is a south-facing brick wall perhaps ten feet tall and a hundred feet long with buttresses jutting out every so often. This was planted with *Ceanothus, Clematis, Solanum jasminoides*, manzanitas, and so many other half-hardy shrubs and climbers that seen to riot in the extra warmth that the bricks afford. At its base was a low raised bed planted to alpine plants, many of which were in full color. This is a really magnificent display. Beyond the wall we entered a wooded area underplanted with huge rhododendrons, handsome magnolias, and rare trees enough to please the keenest collector. Our trail led us into a bog area where there were perfect masses of primroses and meconopsis in full flower growing among *Trillium, Orchis, Epimedium*, and a host of other flowering plants.

Lunch was in the new restaurant with an attractive terrace and stone wall planted to gay flowered rock plants. Still in high gear some of us trailed Mr. Findley to a small beechwood, dating probably to about 1790. The elephant-gray boles rose out of a carpet of emerald green moss—nothing else seems to grow under their dense shade —to a height of sixty or seventy feet with a crown of interlacing branches, mimicking the moss-green below. A recent development near a small pond was next. In a trench about four feet deep and seven or eight wide a newly planted peat garden with a wide range of ericaceous shrublets, rare *Primula* species and a wealth of other moisture and acid loving plants had been established. This should be a very attractive feature in a few years.

Many of the plants in the Savill Gardens are large specimens some of which were quite sizable when they were planted but obviously the rich peaty soil and high water table is conducive to rapid growth. I should certainly like to revisit this garden in late April or early May!

Our next stop, after a drive which took us past Ascot, the famous race track, was the Sunningdale Nurseries where we met Mr. James Russell and Mr. Graham Thomas. This is an old nursery with some of the plants dating back to over 100 years. There are even a few of the original Standish and Noble rhododendron hybrids still on the grounds, monsterous plants but unfortunately most are without identifying labels. Mr. Thomas, one of the world's foremost authorities on the rose, took us

through his collection of species and shrub roses, certainly ranking among the best in the world.

The Sunningdale rhododendrons were growing under woodland conditions and ranged from dwarfs to some tree-like species. Mr. Russell complained of the dry climate and poor soil but the plants looked in fine condition to me. It was obvious, however, that they were having problems finding adequate labor since some weeding was certainly in order. I felt right at home.

The Russell home was in the nursery, an old forester's cottage remodeled; a very interesting wooden frame structure. We were invited in for tea—actually iced coffee —and a belt-stretching array of goodies. We have met with nothing but hospitality in the past three days.

Back in London wih still a few hours of light left and not the least desire for dinner. A few of us went to Hyde Park—not for horticultural purposes but to visit the famous "speaker's corner" like any good tourist should.

June 13

To Brighton today, a resort town due south of London on the English Channel. Mr. Powell, our courier, shepherded us onto the train and very smoothly we rolled the fifty or so miles over the rolling green of the Weald and onto the chalk of the South Downs. Our party was met by the Director of Parks and Assistant Director of Parks who escorted us first through the lush green hills above the city to the little village of Stanmer, a delightful place with one row of houses, a small store and probably a pub though I didn't see it. After coffee there we were taken to the very extensive nursery run by Brighton. I was amazed that a city of some 100,000 should have such a large park department until we were told that it caters to Londoners on weekends, sort of an English Atlantic City, and a determined effort is made to beautify the city. They have over 400 employees in the park department—wonder how many in Seattle?

The nurseries were a picture—rows and rows of well grown trees and shrubs, so clean, tidy. They obviously use large stock for planting out in order to make an immediate effect. The soil is so alkaline, however, that they couldn't grow may of the plants we take for granted—no Rhododendrons, no Camellias or Eucryphias. It must be difficult to have the climate for these plants but not the soil.

Lunch was an experience! We were taken to the Royal Pavilion, built in the early 1800's by George IV in the style Chinois with a fantastic collection of domes, bulbs, turnips, etc. in green and gold. We ate in the state diningroom with the Mayor presiding. It seems that the Brighton Parks Department is hosting a park conference next year and we are "getting the treatment" in the hope that we will spread the word about. The lunch was delicious.

After a short tour of the "Lanes" of Brighton, a winding maze of narrow streets lined with shops where I bought a horse brass, we were taken to an old Edwardian home, now a museum, for tea yet, with cakes, tarts, scones, ad nauseum. We walked off some of the excess in a visit to the attractive Garden of Fragrance in a walled garden, then up and down a steep rock garden with bright flowers rather than choice plants. There was a lovely thatched stone cottage at the base of the rock garden, once a police station but now marked GENTS.

Brighton might well be congratulated on its parks—they certainly show a good deal of imagination and much care devoted to them.

(To be continued)

WORK & FUN DAY

Help clean up the Arboretum

WEDNESDAY, APRIL 19, 1967

9:30 A.M.

Everybody Welcome

The George Washington Elm

Gordon D. Marckworth

WASHINGTON ELM DOOMED. That statement could have been the headline for a story in the Cambridge, Massachusetts papers on October 26, 1923 or in Seattle, Washington papers on August 11, 1963. Both statements were true.

The original Washington elm, under which George Washington is reported to have taken command of the Continental Army in 1775, died of old age on October 26, 1923. It had been damaged in a storm and in the process of removing some of the dead branches "fell down." It was estimated that the tree was between 204 and 210 years old.

The original elm stood on the edge of the Cambridge Common at the corner of Garden and Mason streets. When the street was widened, the tree came within the street line but was allowed to remain and was protected by a fence. A granite tablet now marks the place where the tree stood.

Although the original elm tree is dead, a portion of that tree has been preserved on the University of Washington campus. In 1899, when Arthur J. Collins, a Spokane high school teacher and an alumnus of the University of Washington, was attending Harvard University he passed the Washington elm almost daily. Its history intrigued him and the thought occurred to him that it would be wonderful if a scion of the original tree could be planted on the University of Washington campus.

After convincing the Cambridge Park Commission that he had no ulterior motives, he was allowed to collect some scions from the tree. Through the cooperation of the Harvard Botanical Gardens and the Arnold Arboretum, he was successful in rooting two of them. These were shipped

(*Continued on Page 22*)

A Visit to the Park of a Thousand Pines

Ritsurin Park in Takamatso on Shikoku Island, Japan

Bernice Ferrier Smith*

The cherry blossoms were flowering in Japan last April when we followed the old Tokaido Road from Tokyo to Kyoto, along the highway known to so many westerners by the lovely Hioshige woodblock prints, the 53 stages, made by Hiroshige when he was a member of the party taking a gift of horses from the Shogun of Edo to the Emperor at Kyoto in 1832. The Tokaido is the road bearing the most traffic of any in Japan, today as in the earliest times. The landscape is so picturesque, especially in cherry blossom time, that we felt like participants in a tableau, living in the center of a real picture. We learned the cherry blossom song *Sakura* from our guide, and I can still sing a line or two in Japanese.

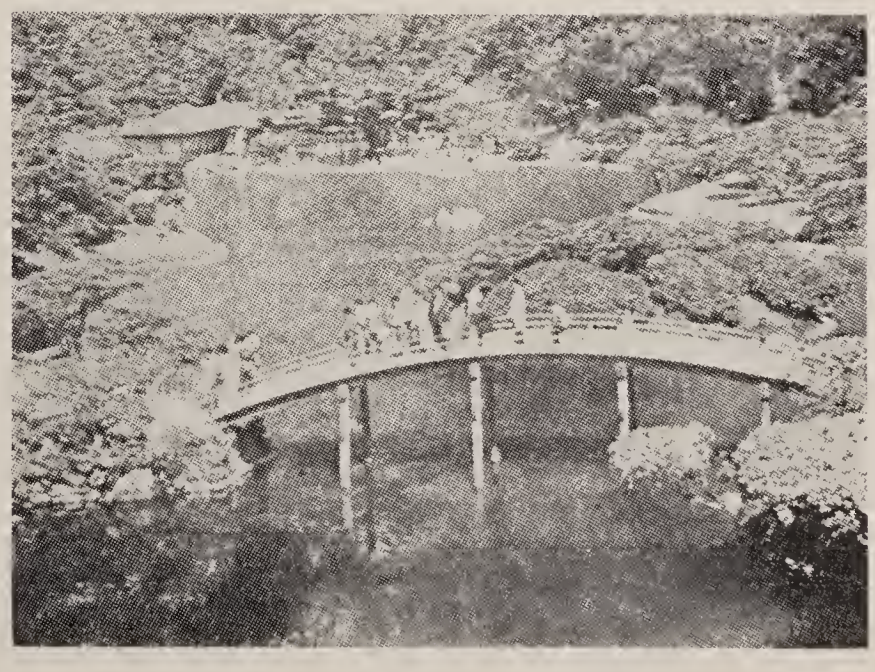
Our stops were not as numerous as Hiroshige's fifty-three. We spent time at Kamakura, Hakone, Atami, Nagoya, Mikimoto's pearl island near Tobakowakien, where we saw the white-clad girl pearl divers, and priced the pearls on their own home grounds. Kyoto was also on our route, and a tour of Nara with its five-tiered pagoda, its turtles sunning in the ponds, and the polite deer of Nara Park who bow when fed by visitors. We took the Bullet train from Kyoto to Kobe, and it really travels at 125 miles per hour, so smoothly that it is hard to believe the evidence of the wall speedometer. From Kobe we travelled by boat to the city of Takamatsu on Shikoku Island. This Inland Sea trip has a magic and enchantment of beauty and charm of olden times—the passengers on the boat wore Japanese dress, kimonos for both men and women, now seldom seen in the large cities in such numbers as in this area, and we heard no word of English except from our guide as we glided past floating islands and looked at faraway mountains on the horizon.

Shikoku Island has as its major attractions Ritsurin Park, Yashima Plateau, and Kompira-san, the second most popular shrine in Japan whose Gods are patrons of those who travel on water. We saw groups of religious pilgrims dressed in white, making the trip around the island to visit its eighty-eight sacred spots. Devout Buddhists believe that making this pilgrimage insures salvation, and the truly faithful make the long trip on foot, although some of the very modern pious ones use auto or bus.

We stayed at Shintokiwa Inn, a Japanese inn of great beauty and comfort. Its courtyard garden with a fountain and mossy rocks was a spot of beauty and tranquility which we viewed from the dining room and from our bedroom. The water noise made by the fountain was like a little song in our ears.

In Takamatsu is the most memorable

A view of the garden.
Fig. 3



*Mrs. Smith is Librarian—College of Forestry —University of Washington.

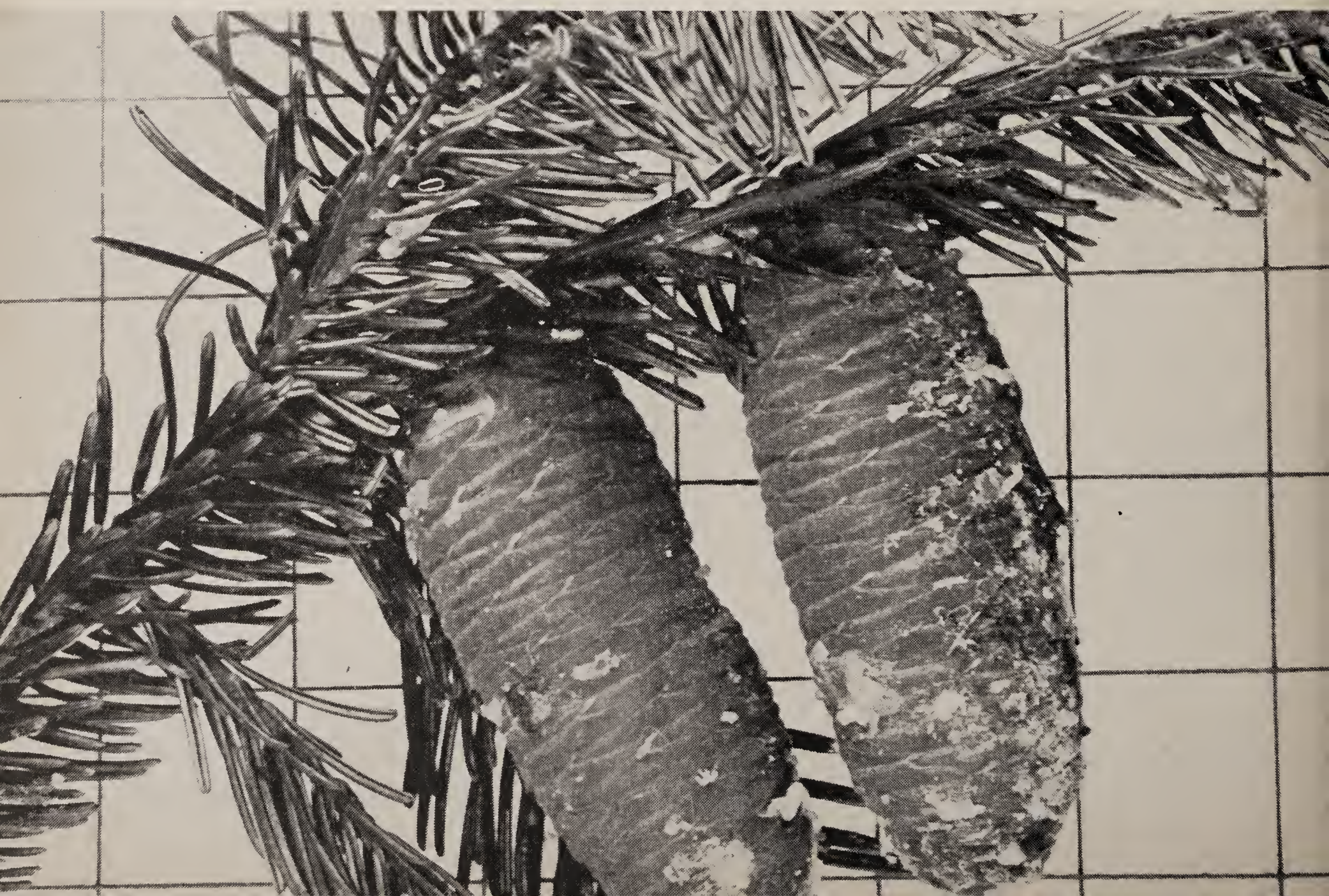
The George Washington Elm on the University of Washington Campus.
Photo: Campus Studios
Fig. 2

spot in all the beautiful garden islands of Japan: the magnificent Ritsurin Park with its planting of great and small specimen trees. There are 8,500 trees of 164 species. In Japanese "Ritsurin" means "forest of chestnut trees," but the great majority of the trees are pines. Ritsurin is so renowned that it is visited yearly by more than two million people. It was established in the year 982, and has been improved and enlarged for nearly ten centuries. The garden is centered around thirteen hills and six ponds, with a master plan arrangement of pines of magnificent shapes from the near-Bonsai size to towering giants with the most perfect branch formation that one could imagine—real living sculpture. The visitor is instructed to view the gardens with a counter-clockwise walk, so that the ponds are always on the left. There are arched bridges which cross the ponds and are mirrored in their clear waters so perfectly that one is not sure which is the bridge and which is the reflection.

This garden was originally the private estate of the ruling Daimyo, the Matsudaras, a branch of the Shogun's family, and was developed to such an admirable state of beauty that it was ceded to the city in perpetuity as a public treasure so that all the people could enjoy it. There are one hundred thirty-four acres in the old estate, and one of the show places is the Matsudara residence. It is a treasure house of architectural form, simple and classic in style, and in perfect harmony with the pines of Ritsurin. The house has no garden planting except small pines, enhanced by gravel raked in patterns instead of grass.

The varying shapes of the pines are an example of what essential beauty is, and these trees must really be a source of inspiration to artists who seek first sources. Only in Japan which knows the beauty of economy and the delight of beauty unadorned could such a garden exist and be so admired that millions make the trip to see and appreciate it.

Below—
Grand Fir-cones and foliage (of upper crown). Inch squares in background give indication of size.
Photo by: C. Frank Brockman
Fig. 4



Grand Fir

Abies grandis (Dougl.) Lindl.

C. Frank Brockman*

In the dense virgin forests of the Puget Sound lowlands, where many species of conifers are "grand" in appearance and stature, it seems inappropriate to apply that label to this particular evergreen. Though larger individuals* usually attain a height up to 150 feet and a diameter of 2 to 4 feet, often with a clear bole and dome-like crown, the identity of the grand fir is often not too obvious when found in mixture with its coniferous associates. Still it bears certain distinctive features by which it may be quickly and easily recognized.

The needles grow directly from the branch, are flattened in cross section and 1 to 2 inches long. Like all true firs they are sessile at the base and upon dropping or when pulled off they leave a distinctive round, depressed leaf scar on the twig. But the needles of the grand fir are distinctly two-ranked with a comb-like row extending horizontally on each side of the twig, as well as variable in length, with short needles alternating with others somewhat longer. To many people the pattern of foliage, with the twig conspicuously visible between the two rows of needles has an appearance not unlike hair parted in the middle. None of the other true firs indigenous to the Puget Sound basin—Pacific silver fir (*A. amabilis*), noble fir (*A. procera*) and subalpine fir (*A. lasiocarpa*)—have foliage arranged in this manner. In these species the needles clothe the branchlets more thickly, extending upward as well as outward, so that the twigs are not readily visible. Where grand fir occurs with Pacific silver fir, as it does at higher levels of its altitudinal range in this area, the two species may be readily distinguished by this feature for the needles of both species bear lines of stomates only on the under side. In contrast stomates are found on all surfaces of the foliage in both noble and subalpine fir, a feature which gives these trees—particularly the noble fir—a silvery tinge.

Cones of all true firs stand upright upon the branches and disintegrate at the end of the first season, leaving the slender spike with a few basal scales attached to the branch. Those of grand fir are cylindrical, 2-1/2 to 4-1/2 inches long, usually yellowish-green, and with bracts shorter than the scales. The somewhat smaller cylindrical cones (2 to 4 inches long) of subalpine fir and the larger barrel-shaped cones (3-1/2 to 6 inches long) of Pacific silver fir are purple; both have bracts shorter than the scales. The columnar noble fir cones (4 to 6 inches long) are distinctively different from those of the foregoing species since they bear brownish, exerted bracts longer than the scales which overlap to completely cover the outer surface, giving the cone a "shingled" appearance.

Another common name—lowland white fir—implies that, in spite of dissimularities in foliage, it is sometimes confused with white fir (A. concolor), common in Oregon and other western states. White fir needles may be up to three inches long, are flattened in cross section and obscurely two-ranked, and bear lines of stomates on the upper as well as the lower surface. But more specifically this second common name of grand fir indicates that this species is typical of low elevations. In the Puget Sound Basin it prefers deep alluvial soils along streams or on gentle mountain slopes, rarely at elevations higher than 2,000 feet. Because of its altidunal range here it is not as common as other true firs indigenous to

(*Continued on Page 19*)

*Another of Prof. Brockman's very interesting tree series.

*As listed in the January 1961 issue of American Forests Magazine the largest specimen, found in Mount Rainier National Park, is 175 feet tall and a little more than 7 feet in diameter.

Mahonia 'Arthur Menzies'

J. A. Witt

In late September 1961, the Strybing Arboretum, San Francisco, sent us a group of seedling *Mahonia* plants raised from *M. lomariifolia* seeds. These were grown for a year or so in the cold frames then transferred to the lath house as they increased in size. When this last move was made one plant seemed to have a very different leaf from the rest and we speculated that it might be a hybrid, perhaps with *M. Bealei* since the shape of the leaflets suggested that species. Our suspicions of its mixed parentage were strengthened in December 1964 when a drop in temperature to 11°F and continued below-freezing conditions for several days reduced all its sister seedling to brown pulp but left it nearly untouched.

This fall flower buds were noticed on this plant which by the end of December had developed into five to ten-inch long spikes covered with bright yellow flowers. We have examined it quite carefully and feel our original assumption that it is a hybrid between *M. lomariifolia* and *M. Bealei* was probably correct.

In order to be more certain we sent an inquiry to Strybing Arboretum to find if either *M. Bealei* or some other *Mahonia* was within pollinzing range of the seed plants. We then learned that the seed did not come from plants in the Arboretum but rather from the garden of Mr. Arthur Menzies, Supervisor of Plant Accessions for the Strybing Arboretum. He, too, felt that the hybrid "definitely is a *M. lomariifolia* × *M. Bealei* hybrid" since he did not have *M. japonica* in his garden.

This question of parentage is of some importance since there is a *lomariifolia-japonica* hybrid extant in Great Britain, a fine plant called *M.* "Charity." There has been no complete description of this clone published, but in comparing photographs of it with our mahonia certain differences become obvious. Its leaflets are slenderer and the racemes are somewhat lax, whereas they are nearly erect in our hybrid.

It is with very great pleasure, therefore, that we name this new hybrid *Mahonia* "Arthur Menzies" in honor of one of the most knowledgeable horticulturists in California. Further testing will be required to determine its hardiness since so far it has had some protection from the lath house. We are propagating it now and hope to distribute it when sufficient stock is available. *Mahonia* "Arthur Menzies" should prove to be a welcome winter flowering shrub and if it is as hardy as we think, it may be a valuable substitute for *M. lomariifolia* in places where the latter is not thoroughly hardy.

A complete description follows:

Mahonia 'Arthur Menzies'

An erect, glabrous, several stemmed shrub about six feet tall at the end of five years.

The leaves are persistent, up to 55 cm. long and 15 to 20 cm. broad, odd pinnate, with 7 to 8 pairs of opposite leaflets. Leaflets dull green above, yellow-green below, thick, leathery, the basal pair 3 x 3 cm., sub-rounded, the others changing to ovate and thence to oblong ovate toward the tip, increasing in length from 4 to 11 cm. long and from 3.5 to 4.5 cm. broad; the base obliquely truncate and often imbricate with its opposing mate, the tip spinose, long acute to shortly acuminate, often somewhat recurved and falcate; the margin spinose with from 3 to 5 spines on each side. The terminal leaflet ovate, usually larger, 9 to 14 cm. long, 4.5 to 6 cm. broad.

Flowers faintly scented, in several (7-9) erect fascicled racemes 10 to 25 cm. long, appearing in late December and continuing through January. Floral bracts ovate, 4 mm. long, 2 to 3 mm. wide, greenish; pedicels 6 to 8 mm. long. Flowers yellow (RHS colour fan yellow group 5A), nodding, campanulate, about 1 cm. broad at

anthesis, sepals 9, in three concentric rows, the outer ovate, 1.5-2 mm. long and 1 mm. wide, the median 3.5-4 mm. long, 2.513 mm. broad, the inner 8-9 mm. long, 4-5 mm. broad, oblong ovate; petals 6, ovate to oblong ovate, 7-8 mm. long, 5 mm. broad, tip emarginate, glands two, distinct; stamens 6, 4-5 mm. long, subapiculate, ovary green, cylindric, as long as the stamens and with a sessile capitate stigma.

Fruit not seen.

Below—
Mahonia hybrid 'Arthur Menzies' flowering for the first time at Arboretum, January 1967. Photo by: William Eng
Fig. 5

Gordonia axillaris

The eastern half of the east greenhouse in the Arboretum is kept quite cool at all times of the year, and is used especially during the winter to shelter evergreen shrubs which are not fully hardy here in prolonged cold weather; e.g., the cultivated Chinese forms of *Camellia reticulata* and several of the *Maddenii* series of rhododendrons.

One evergreen shrub which gave us much more flower and enjoyment there during the past winter season than previously was *Gordonia axillaris*, which bloomed in succession for at least two months in the border on the north side of the house and was at its peak around Christmas. This plant is a native of southern China, from Yunnan and Szechuan in the west to the coastal provinces of Chekiang and Fukien; also of Taiwan, where

it grows up to about 7,000 feet altitude.

Our plant, which came to us from Mr. Donald Stryker, of Langlois, Oregon, in March 1954, together with several camellias and some other rare plants, is now about 4-1/2 feet tall and somewhat more in width, but is certainly capable of growing much larger, since in its native home it can become a tree up to 50 feet in height. No doubt it would prefer a warmer climate than that of Seattle, although in Peter Riedel's *Plants for Extra-Tropical Regions* (Los Angeles, 1957) it is noted that the *Gordonia* "probably feel more at home in a climate more humid than that of southern California."

The decorative value of the plant lies both in its thick glossy evergreen leaves, from four to six inches long, bluntly pointed, shallowly toothed only in the upper half and tapering at the base to a stout petiole; they are not unlike those of *Photinia serrulata*, but lack any reddish coloration.

The flowers are borne close together at the ends of shoots formed the previous year, opening successively over a long period during the winter months; each is about 3-1/2 inches wide, the petals white, with a very prominent cluster of stamens in its center; there is a very slight fragrance. (fig. 6)

As can be seen from the photograph, there is a considerable resemblance to the flower of a single camellia, and perhaps even more so to that of a *Stuartia* species. In fact, when the plant was first introduced to England from eastern China in the early 19th century it was named *Camellia axillaris* by John B. Ker in the *Botanical Magazine*, vol. 14, t. 349, (1818). It was not transferred to the genus *Gordonia*, which differs primarily from *Camellia* in the character of its fruits, until 1893. There is a photograph of a wild tree in *Forest Botany of China*, by Shun-Ching Lee (Shanghai, 1935), and a drawing showing bud, flower and fruit in *Woody Flora of Taiwan*, by Dr. Hui-Lin Li, (Narberth, Pa., 1963).

It is unlikely that this *Gordonia* can be grown successfully outdoors in the Puget Sound area, but as a cool greenhouse plant it has many excellent qualities.

B.O.M.

Gordonia axillaris flowering in Arboretum greenhouse—December 1966.
Photo by: B. O. Mulligan
Fig. 6

Ladder Creek Gardens

John M. Nelson*

In the midst of Seattle City Light's Skagit power complex lies the quiet and carefully preserved beauty of the Ladder Creek Gardens.

The gardens are set in the spectacular country of the Skagit River Gorge, where the mountains rise a mile high on each side of the river, and box canyons upstream and downstream form a protective wall around several hundred acres of rich land.

The natural beauties have been made accessible to the general public through placement of paths, bathed at night in colored lights. Scattered benches invite a quiet rest, and soft music, broadcast over equipment designed and made by the department, adds to the tranquility.

The cascades of Ladder Creek tumble down through the garden from a glacier 5,000 feet above. The falls are illuminated at night with lights of changing colors.

The Garden area is a point of land about 80 feet high, at elevation 880 feet, with steep sides and large out-croppings of rock. It is comparatively flat on top and heavily covered with new and old growth timber.

Additions to the gardens are continuous. A new greenhouse has been built for starting cuttings and annuals, for holding over flowers such as fuchsias, geraniums and

*Mr. Nelson is Superintendent, Seattle City Light.

A view in the Gardens where an estimated 25,000 visit each year.
Photo Courtesy City Light
Fig. 7

calla lilies, and for storage. This year, a coldframe and a nursery area have been added. A new cement tank has been connected to the coldframes and will be heated for holding over goldfish and water lilies. Large trout should be established in some of the pools this year.

Copies of the yokes used by the Dutch to carry milk, have been made this winter. Since all the materials must be carried on to the hill by hand, it is hoped the yokes will make this task easier.

Most of the work is done in the autumn when the annual beds are cleaned up and fertilizer spaded in. Winter work consists mostly of keeping trash cleaned out.

The annuals are changed from year to year, but usually include lobelia, nasturtium, marigold, nicotiana, salvia, callas, begonia, godeta, geraniums, nemesia, ageratum and fuchsia Perennials are mostly ferns such as maidenhair and sword. Some new lily beds have been planted, including regal, peruvian, tiger, iris and lily of the valley.

The shrubbery is native—rhododendron, azaleas, salal and Oregon grape. Variety is limited because of snow and lack of adequate sun in this area. The trees are almost all native and include fir, cedar, hemlock, spruce, dogwood, vine maple, alder and birch. To these have been added Japanese maple, Colorado blue spruce, hawthorne and holly.

The gardens were established by James D. Ross, often called the father of City Light. It was Ross who first recognized in the Skagit River a perpetual source of power for Seattle and who was largely responsible for its hydroelectric development. Ross was also a devoted gardener who delighted in introducing new plants to the gardens.

Tours of the Skagit Hydroelectric Project, including the rock gardens, are conducted each summer by City Light. More than 25,000 visit the project each year.

Some of Our Favorites ☆

The Early Blooming Rhododendron

I'm a Rhodo-holic! It's bad! But really, it's very nice! Whenever the word Rhododendron comes into a conversation, I immediately perk up, ears straining to catch every word, or if I see the word in print, I come to attention, absorbing each word. This magic word comes from the Greek and means "tree rose." Hardy or tender, it is a showy flowering shrub, usually evergreen and varying in size from a midget 2-inch mat to titanic trees to 80 feet in the air. "Rhododendrons have the most eminent of ancestors being descended through the camellia and Dillenia families from the Magnolia," says David G. Leach in his book *Rhododendrons of the World.*

At this supposedly dull time of year for flowering, I constantly look for an early bloomer and place it in the garden where it can be enjoyed to its fullest.

Living at 1025 foot elevation where temperatures are 3-10 degrees lower than in most gardens, I must obtain very hardy plants. Last year our dear little 'Bric-a-Brac,' although it cannot take low temperatures without a great deal of sheltering, still bloomed beautifully through a 6-inch mantle of snow in March. I am looking forward this season to viewing other early bloomers, especially "Conemaugh," which I read about in "Some of Our Favorites," also *R. dauricum*, purple; *R. ciliatum*, pink to white; *R. flavidum*, yellow; *R. pemakoense*, pinkish-purple; "Cilpinense," pale shell pink; "Praecox," rosy purple; "Tessa," rosy lilac and "Christmas Cheer," pink fading white. My wish list includes *R. mucronulatum*, purple and *R. moupinense*, white, which you may see in the Arboretum usually in mid-February.

Plan to walk to Rhododendron Glen this early season and see what is in bloom. You may obtain a bulletin "Rhododendron Glen" from the Arboretum office to guide you to the early bloomers beginning March 1st and continue visiting the Glen regularly into the early summer months.

Early spring color isn't always the most important part of choosing a rhododendron. Its structure, whether tree-like, rambling or a compact shrub, its hardiness and leaf texture are important considerations in choosing rhododendrons. I like the foliage of many prostrate ones such as *R. forrestii*, *R. radicans*, "Carmen," "Rose Elf," and "Treasure" just to name a few. The foliage of some is aromatic, others have striking foliage of bronze, gray and other soft green shades. Take closer inspection of your rhododendrons as you walk through your garden, and notice the different shades of velvety injumentum on the underside of the leaf, from white to rusty brown on some. Also some have hairy stems and/or leaves. More difficult to see without a microscope are the scales of still others.

I am looking forward to the winter blooming Rhododendrons, but at the same time seeing the beauty in all of them. Perhaps you too will become a Rhodo-holic, really it's nice!

Marilyn (Mrs. Richard) Kolesar

Grand Fir

(*Continued from Page 13*)

this area for the vegetation of the more accessible Puget Sound lowlands has been greatly modified by early logging, agriculture and, more recently, expanding industrial and urban development. When one does see it in this area it is generally associated with other conifers such as western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), Douglas-fir (*Pseudotsuga menziesii*), and Sitka spruce (*Picea sitchensis*). Along lowland streams it not uncommonly occurs with such species as red alder, bigleaf maple and black cottonwood.

Grand fir grows over a wide area beyond the Puget Sound basin. It ranges south through western Oregon into coastal northern California, where it often occurs with coast redwood (*Sequoia sempervivens*). It is also found in southwestern coastal British Columbia and eastward through the Inland Empire—including southern British Columbia, eastern Washington, the Blue and Wallowa Mountains of northeastern Oregon and the Bitterroots of northern Idaho—to the northern Rockies of western Montana and northwestern Wyoming. In the more rigorous climate of the northern Rockies, it is much smaller in stature than in the more moderate and moist climatic area west of the Cascades.

Grand fir is attractive as an ornamental but is not of significant importance as a timber tree. Its wood, brittle and lacking in both strength and durability, has relatively limited use for paper pulp, box lumber and related purposes.

List of Species

(*Continued from Page 6*)

mucronulatum
" 'Cornell Pink'

Fortunei Series:
erubescens
fargesii
oreodoxa
praevernum
sutchuenense
" var. Giraldii
vernicosum

Heliolepis Series:
desquamatum

Irroratum Series:
araiophyllum
irroratum

Lacteum Series
beesianum
dryophyllum

Lappoconicum Series:
chryseum
fastigiatum
glomerulatum
hippophaeoides
impeditum
intricatum
orthocladum
ravum (aff.)
rupicola
russatum
scintillans

Maddenii Series:
ciliatum

Moupinense Series:
moupinense

Neriiflorum Series:
chamae-thomsonii
var. chamaethauma
floccigerum
neriiflorum

Ponticum Series:
aureum
adenopodum
degronianum
hyperythrum
makinoi
metternichii

Saluenense Series:
calostrotum

Scabrifolium Series:
racemosum
spiciferum

Taliense Series:
adenogynum (x's?)
roxieanum

Thomsonii Series:
callimorphum
thomsonii
williamsianum

Triflorum Series:
augustinii
" var. chasmanthum
bodinieri
charianthum
davidsonianum
hanceanum 'Nanum'
keiskei
lutescens
(F.C.C. form)
oreotrephes
polylepis
yunnanense

Uniflorum Series:
imperator
pemakoense

The Arboretum Bulletin

Vol. XXX, No. 1 Seattle, Wash. Spring 1967

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SPECIAL NOTICE

To keep membership in the Arboretum Foundation in good standing, dues should be paid during the month payable. Active memberships more than three months in arrears will be dropped and The Bulletin will be discontinued.

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University of Washington Arboretum
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I hereby apply for membership in the Arboretum Foundation and remittance for same is enclosed to cover dues for the next succeeding 12 months.

Name .....

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All memberships are non-assessable.

Notes and Comment

In Appreciation

Dear Hosts:

Each morning on the way to work at the University of Washington, we have the unfolding pleasure of driving through the Arboretum.

We allow extra time from our starting point at Leschi to enjoy the constant changing scene of Lake Washington with mountain backdrop, plantings in gardens along the way climaxed by the park landscape offered for enjoyment by many busy, dedicated workers in the Arboretum.

Over the years, it is never twice the same! Weather conditions, lighting, seasonal growth or rest, men busy with chores, a truck with lights moving in the dark winter on the "high" road accompanied by birds, squirrel and bouncy rabbits—is a continuing delight to us.

As long time residents of Seattle we are increasingly grateful for the forethought which has provided the boulevard system and area now developed by your efforts. So much of all we've cherished has been scrapped away to make way for ?, so we offer this word of sincere approval and warm support for the great contribution your activity supplies to this unique city. The colored pictures enclosed are a sample of our enlarging collection of beautiful slides to enjoy at any season and share with out of town guests. Again, our very sincere thanks!

Cordially yours,
The Fredrick Gleasons

XI International Botanical Congress

The XI International Botanical Congress will be held on the campus of the University of Washington from August 24 to September 2, 1969. It is expected that up to 5,000 botanical scientists from all over

the world will attend. This is the first time a meeting of this magnitude has been held on the campus and the first time a World Botanical Congress has been in Western North America. The 1964 Congress was in Edinburgh, Scotland and the 1959 Congress in Montreal, Canada.

Many of the planning details are well underway. National and specific program committees have been appointed and are meeting regularly to set in motion the complex organization needed to make a meeting of this kind a success.

Dr. James Bethel, Dean of the College of Forestry, and Dr. R. B. Walker, Head of the Botany Department, are both on the National Committee. Many other faculty members and staff of the University are involved in general arrangements and program committees. The University is providing appropriate meeting and conference rooms and will coordinate housing of delegates. In addition to the many scientific sessions planned, botanists of all kinds will be taking pre- and post-conference field trips throughout the Western United States. Short in-Congress field trips to points in Western Washington will be almost daily occurrences. The Arboretum will be an important and inviting place for many of these trips.

We will keep you informed of further progress as time for the Congress draws near. We may also be calling upon many of you to help in a number of ways to make this World Congress a memorable event for the distinguished guests who will be in Seattle.

S. P. Gessel

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We are pleased to welcome the following new members (December 1, 1966 through February 28, 1967). *Contributing*—Joshua Green, Sr. *Sustaining*—Mrs. Harry F. Du Bois, Holly Park Garden Club, North Island Garden Club, Paul A. Palomino. *Annual*—Mrs. Gerald F. Andersch, Henry Biddle Anderson, Paul W. Anderson, M.D., Mrs. Robert K. Arnold, Mrs. Ernest Atlas, Mrs. Ann H. Bard, Mrs. Robert Bolles, Botanical Garden Association, Howard Call, Mrs. John Cowman, Mrs. D. J. Daugherty, Mrs. Douglas De Forest, Dwight M. Didzun, Mr. & Mrs. Dean Fischer, Stanford Freelin, Mrs. Howard Gardner, Miss Cora Gerken, Mrs. Lawrence William Green, III, Ms. E. J. Greig, Mrs. Ruth M. Hansen, Mrs. Kjell Isaksen, Mrs. Gerald B. Jensen, Mrs. Daniel E. Jessup, Mrs. G. Franklin Jones, Mrs. Jan H. Kiaer, Mrs. Douglas D. Kiefer, Mrs. Deral H. Kurz, Mrs. R. L. Lankford, Mrs. Richard Lord, Mrs. E. W. Luker, Mrs. Wallace Meacham, Ms. Joseph W. Miller, Mrs. Charles Moore, Mrs. Richard E. Morell, Mrs. Donald T. Morrison, Mrs. Thomas A. Murphy, Mrs. D. K. Nelson, s. Herman Newkirk, Mrs. Ira M. Overstreet, Mrs. George L. Pace, Mrs. Ernest Parsons, Mrs. Cyril W. Pemberton, Ms. Donald L. Peters, Mrs. David B. Petherick, C. Mario Santelli, Mrs. James C. Scott, Mrs. Alfred E. Sealey, Mrs. Lynn D. Sherman, Mrs. Floyd Shiosiki, Clayton H. Stearns, Mrs. Lavern J. Weber, Mrs. Ronald Weeks, Mrs. Duane E. Wegner, Mrs. Lloyd E. White.

Wea re also grateful to the following who have increased membership dues: *Contributing*—Mrs. Robert W. Sprague. *Sustaining*—Mrs. Joshua Green, Sr., Mrs. L. H. Murphy.

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BOOK REVIEWS

Dwarf Conifers—A Complete Guide by H. J. Welch. 334 pp. Illus. Faber 84s. 1966

This outstanding compilation by a nurseryman who specializes in dwarf forms and is a very active member of the Royal Horticultural Society is the most comprehensive, authoritative, and valuable work on dwarf and slow growing conifers since the appearance of Murray Hornibrook's landmark publication over a quarter of a century ago.

Following the very informative foreword by Dr. John Gilmour, the first sections of the book deal with the uses of conifers and their cultivation requirements. Mr. Welch then takes on the sometimes confusing problem of nomenclature. Undoubtedly among the botanical purists there will be some disagreement about the ordering of some of the species. Without any claim of having botanical expertise, this reviewer feels that the section on nomenclature is brilliantly supported by twenty beautiful full page identification plates. Selected sprays of the various plants have been photographed against a scale background which is an invaluable aid in indicating size.

The next 220 pages describes in alphabetical order the many dwarf conifers available in Europe and North America. The illustrative material in this section is a beautiful series of black and white photographs showing individual and specimen plants growing under different conditions. This section is followed by a short chapter on pests and disease, from which conifers are fairly free. Their greatest enemy is the damage done by cats and dogs. The index is well-organized and will be most useful.

Mr. Welch is obviously a specialist and has written on a complex subject with an easy style and enthusiasm which is infectious. The book is a must purchase for those who have any interest in conifers, and it will be indispensable to the person with a small garden who desires variety in his plantings. Mr. Welch has provided us with what will prove to be a basic work for many years to come. The only shortcoming is that the book's size is crown quarto which will make its use difficult in the field. Kenneth S. Allen

The George Washington Elm

(*Continued from Page 10*)

to Professor Edmund S. Meany of the University of Washington faculty, in March 1902, who planted them on the campus in front of Lewis Hall. While two trees were sent, their roots were so closely intertwined it was decided to plant them together. As it turned out, both grew well and they developed as twin trees, side by side.

When the original elm died in 1923, it was suggested that the tree growing on the University of Washington campus be dug up and shipped to Cambridge to take its place. Because of its size, it was doubtful if the tree would survive the trip, so it was decided to root a scion instead.

Mr. Ludwig Metzger, Chief Gardener of the University of Washington campus, realizing that it was difficult to root elm scions, decided to try a new method. He fastened a box filled with moss and earth around a branch of the tree. Two such boxes were placed in the tree, where they remained from March 3, 1938 to April 23, 1939. When the limbs were severed from the tree and the boxes lowered and opened, it was found that there were three scions with good roots. The larger of the three was later shipped to Cambridge but did not live. One of the smaller trees was planted on the capitol grounds in Washington, D.C., and the other on the capitol grounds in Olympia. The latter tree flourished until blown down in the "Columbus Day Storm," October 12, 1962.

Mr. Metzger was successful in getting other scions to root and one of these was planted in the University of Washington Arboretum on February 22, 1938. It is now about five inches in diameter and thirty feet tall. Another planted about the same time is growing south of Bagley Hall.

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The original tree planted on the campus continued to grow well until struck by lightning on August 11, 1963. A large strip of bark and wood was torn off the tree and in spite of efforts to repair the damage, the tree finally succumbed to rot and was removed December 28, 1966.

A number of cuttings have been taken from the University elm, and plans are to plant one of the smaller scions in some prominent place on the campus and perpetuate the original Washington elm.

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